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# CANCER AND ITS TREATMENT.

BY



DANIEL LEWIS, M.D.

REPRINTED FROM THE "AMERICAN PRACTITIONER," (DECEMBER, 1874).



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READ BEFORE THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

The dogma of a distinctive "cancer-cell" having now been abandoned by its discoverers, the histologists, the leading pathologists of the day may be said to have adopted the opinions of Virchow, who many years back declared the cells of true cancer to be of the epithelial type. A more recent view of the subject, however, inculcates that a special stroma is the anatomical characteristic of cancer; and Mr. Arnott, who is an able advocate of the doctrine, gives expression to it in the following definition of carcinoma.\* "A tumor in which a more or less dense fibroid growth forms a sponge-like or cavernous framework, whose alveoli are filled with loose cells of an epithelial type grouped together disorderly, bathed in a clear fluid, and having no visible intercellular substance."

In view of such conflicting testimony it has been justly said that the microscopist has thus far failed to furnish any positive knowledge on this subject, yet it seems but fair to allow that enough has been accomplished to warrant the belief that the solution of this most important question may yet come from the labors of the histologist. It may be added in this connection that one of the direct results of microscopical study has been to place epithelioma in the list of cancers, where it prop

\* Cancer : its Varieties, their Histology and Diagnosis. Henry Arnott, London.

erly belongs, and there seems reason to believe that rodent ulcers will also be placed in the same category.

The question of cancer being of local or constitutional origin is, as I need hardly remark, of the first importance as regards its treatment. Until very recently pathologists were well-nigh agreed that cancer was a general or systemic affection, which originated in a morbid condition of the blood; and this opinion seems to be in no wise shaken by the fact that the most careful chemical analysis of the blood of cancerous patients has uniformly failed to detect anything abnormal in that fluid. The constitutional as against the local origin of cancer may be said to rest mainly on the four following propositions:

1. Cancer is hereditary.
2. It usually recurs after removal both in the same and in distant organs.
3. Cancer is often found in tubercular families.
4. It is attended by a peculiar cachexia.

There can be no doubt as to the hereditary character of many cases of cancer. Medical literature abounds in instances of this character. The records of the Middlesex Hospital show it to be so in one out of every nine cases; the London Cancer Hospital in one out of eight cases. Paget\* affirms that cancer is inherited in one in every four cases, while Velpeau's experience furnished proof of hereditary predisposition in one in three cases. Walsh is equally decided in the opinion, but gives no statistics. Warren, as quoted by Lawrence,† gives perhaps the most remarkable history on record of hereditary transmission of cancer. He says, "The grandfather died of cancer of the lip; the son had a cancer of the breast; two of his sisters had cancer of the breast; a daughter of one of the ladies had cancer

\* Surgical Pathology.

† Lawrence on Cancer.

of the breast, which was removed at an early period (she died some years after of cancer of the uterus); a daughter of the gentleman has a cancer of the breast."

In a recent discussion on the origin of cancer, in the London Pathological Society, Mr. Paget declared that it was "not possible to conceive of the origin of cancer, or, I would add, of any disease of the like kind, except by inheritance." The localists, as they are called, admit the hereditary nature of cancer, but claim that this does not prove the existence of a dyscrasia of the blood, because many innocent tumors are also hereditary.

Recurrence of cancer after its removal is, as is well known, extremely common. The cause of this is assumed by the generalist to be the pre-existing dyscrasia of the blood. The localist claims, on the other hand, that it is the result of successive infection. It is a clinical fact that cancers recur, sooner or later, according as the cells are loosely or firmly held together, thus encephaloid recurs sooner than scirrhous, while epithelioma, if removed early, often never returns. This seems to favor the idea of the disease becoming constitutional by direct infection from the primary cancer.

De Morgan gives two cases illustrative of this point. The first was one in which, on the removal of a solitary encephaloid tumor on the sole of the foot, a host of similar tumors were rapidly developed in different parts of the limb and in the lymphatic glands.\* The second case was in a man who had the globe removed for a tumor of the eye, when traces of tumor elements were found in the cut surface of the optic nerve. The patient dying a year after with paralysis, the autopsy revealed a growth about the stump of the optic nerve, and another and

\* De Morgan on Cancer.

larger one in the cauda equina. It here seemed evident that cell elements from the primary tumor had drifted in the arachnoid fluid until, becoming entangled in the network of nerves, they developed into the secondary tumor.

In reference to the relation existing between cancer and tubercle, it may in general terms be remarked that many cases of cancer occurring in consumptive families are simply coincidences, and not the result of any direct connection between the two diseases. Walsh does not believe that cancer and tuberculosis are in any way related, while Paget gives cases to prove them actually antagonistic.

The cancer cachexia has been regarded as positive evidence of the constitutional origin of the disease. There are often symptoms in the latter stages of cancer which taken together have been called secondary cachexia. These symptoms are direct results of the systemic infection, and vary in severity according to the degree of pain, amount of hemorrhage, discharge, etc., and derangement of the general system.

A specific primary cachexia has now come to be regarded by many surgeons as, to say the least, exceedingly problematical. Mr. Arnott \* declares it to be a symptom of no value from any point of view. It is a fact well established by observation that cancer is more often found in persons of robust health than otherwise, and very often in long-lived families.

Virchow was among the first to maintain the local origin of cancer. Many of the German pathologists now advocate it, among whom are Waldeyer, Thiersch, and Billroth. In the recent discussion in London the "localists" and "generalists" were about evenly divided as to numbers, which shows the great progress of these views during the past few years. De

\* Arnott on Cancer.

Morgan, Hutchinson, Simon, Arnott, Erichsen, Moxon, and Gull have declared their belief in the local origin of the disease. Here then is the practical point in the whole question. If we accept as correct the theory of blood-origin, we must give preference to the constitutional treatment, which every one knows has thus far proved utterly powerless. The localist, on the other hand, bases the hope of cure upon complete and early removal.

If it be urged that the diagnosis of cancer is uncertain in its earlier stages, the fact remains that the welfare of the patient would not suffer so much in the removal of an innocent tumor *early* as by the *late* excision of a cancer.

A word as to the curability of cancer before entering upon the subject of its treatment. Well-authenticated cases are on record of the spontaneous cure of cancer. Walsh refers to one case reported by Nicod and several cases observed by Bayle. Many surgeons of large experience report cases well twenty years after operation. Dr. Willard Parker has recently reported three cases continuing well after twenty, twenty-two, and twenty-seven years.

The treatment may be embraced under two heads, the constitutional and local. I need not remark that nearly every leading preparation of the *materia medica*, and hundreds which have no place there, has been recommended at one time and another for the cure of cancer in some of its forms, until it would seem vain to hope that any mere drug will ever rise to the dignity of a remedy in the disease. Arsenic is believed by some to possess a certain power over the affection, and hence has been recommended after extirpation of cancer to prevent its recurrence. Marsden \* says "carbonate of soda and other alkalies have undoubtedly a tendency to arrest the growth of

\* Marsden on Cancer, page 90.

cancer." Dr. Willard Parker assigns mental anxiety as the cause of the disease in forty-five of his cases, and in view of the fact urges the employment of what he terms "moral treatment." We know mental anxiety is the cause of many other diseases, and its relation to cancer should therefore be carefully studied.

The local treatment of cancer embraces four methods : 1. Compression ; 2. Electrolysis ; 3. Excision ; 4. Caustics.

Recamier published in 1829 thirty cases of cancer treated by compression alone with the view of producing atrophy. Of these ten were cured, and the remainder, with two exceptions, more or less benefited. For a time it was considered a great conquest in therapeutics, but after a more thorough trial in the Middlesex Hospital and elsewhere it was deemed inefficient, and is now very rarely if ever employed.

The first reported case with which I am acquainted where electricity seemed to possess any remedial power in cancer was reported by Dr. Easton, and was in the person of a lady who, having been struck by lightning, found that a scirrhous tumor with which she was affected, and which had resisted various modes of treatment, gradually disappeared. It is unnecessary to add that since that time many experiments have been made with electricity with results so well known that I shall not repeat them here. Suffice it to say that in my opinion electricity as a remedy in cancer is not to be compared to such agents as the arsenical mucilage, or indeed to any of the caustics in common use.

Excision has long been a favorite remedy with the profession, and in many cases, as is well known, is the most efficient of all modes of treatment. I may add that the tendency among surgeons at the present time is to use the knife at an earlier period of the disease and excise more of the surrounding tissues than

formerly, and that the results are thought to be more satisfactory.

The treatment of cancer by caustics is of almost equal value with that by excision, and is so recognized by many recent authorities. The agents which are in most common use are the strong sulphuric acid, nitric acid, caustic potash, terchloride of antimony, bromine, chloride of zinc, and arsenious acid. The principal objection to most of these is the excessive pain attending their application. The least painful of the above-named is the arsenious acid, used according to the method practiced by Dr. Marsden, of the London Cancer Hospital, who after an experience of nearly twenty years, and covering upward of six thousand cases of cancer, pronounces it superior to every other caustic. He recommends it in every form of cancer, except the cystic or colloid varieties—provided the disease does not exceed four square inches in size—when removal by the knife appears to be the only remedy. Arsenic may be used in this way for cancers in every situation, except the interior of the mouth or nose, localities where the nature of the remedy makes it dangerous. The formula used at the cancer hospital is the following :

R. Arsenious acid, . . . . 3 ij;  
Mucilage of gum acacia, . 3 j.

Mix into a paste too thick to run. This is to be spread over the entire surface of the cancer, provided this does not exceed one square inch in size; a bit of dry lint is then placed over the sore in order to absorb any excess of paste. In the course of an hour the lint becomes dry and hard, and adheres firmly to the parts. In the course of twenty-four hours some inflammatory action is visible in the tissues immediately adjacent to the cancer. There is often also some pain, but this is not usually

severe, and lasts but for a day or two. After the lapse of two or three days, according to circumstances, bread and water poultices, changed every few hours, are to be constantly applied over the sore. A distinct line of demarkation is usually to be seen by this time, and the slough gradually separates and comes away, leaving a healthy cup-like depression, varying in depth and size according to the mass removed. Granulation proceeds rapidly, and the case is then treated as a simple ulcer. The slough separates at periods varying from six to thirty days, according to its size. The disease usually comes away entire with the slough; but where this is not the case the paste is to be applied to the remaining portion, as in the first instance, every second or third day, till the desired effect is produced. The arsenic really appears to have a positive power of election so that if applied to sound tissue along with the cancerous, the diseased part alone is destroyed. Marsden's large experience seems to prove this conclusively. The arsenical paste is equally applicable to cancer, whether on the lip, face, head, arm, hand, abdomen, breast, penis, testicle, labium, scrotum, or foot; but must, as I have stated, be carefully watched, and never applied where the disease involves more than four square inches of tissue. Many medullary and scirrhouus cancers can be removed in this way, but it is especially applicable to the epithelial variety. Marsden believes that nine out of ten cases of this form may be perfectly cured if taken in time.

Before mentioning my own experience in the use of the remedy I will give the history of two cases kindly furnished me by Prof. Fordyce Barker, and which he reported at the New York Library and Journal Association in 1873.

CASE I.—A lady with a most malignant type of cancer, refusing to have it removed by the knife, was treated by Marsden's method. In eighteen days after the first application of

the paste the slough separated and cicatrization was soon completed. Nearly four years after removal there has been no recurrence of the disease.

CASE II.—Had at one time a tumor of the right breast, which Professor Barker considered non-malignant, and which disappeared under treatment. Three years after the patient returned with a true cancer of the left breast, which had existed about a year. Marsden's treatment was at once used. It gave but little pain. In eighteen days the slough came away, and in ten more days cicatrization was complete. This was in April, 1873. The patient remained well for a year, when the disease returned in the same breast. Being in London at the time she consulted Dr. Marsden, who decided in favor of immediate removal by the knife. The result was a wound eight inches in diameter, which healed by granulation in about two months. The further history of the case is not known.

Dr. William W. Crandall, of Andover, N. Y., has kindly furnished me notes of the three following cases occurring in his practice :

CASE I.—Mr.—; aged sixty-nine years (no history of cancer), had an epithelioma, three-quarters of an inch in diameter, situated behind and a little below the left ear, of two years' standing. The paste was applied, followed in ten days by the fall of the slough, and healing of the ulcer in three weeks. The patient lived two years without any recurrence of the disease, when he died of some cardiac affection.

CASE II.—Mrs.—, aged fifty years, had an epithelioma about the size of a dime on the right cheek. A second application of the mucilage was necessary to effect the required destruction. The slough came away in nine days, and the sore was completely healed in about two weeks. Five years after she remains well.

CASE III. was under my own care, for the most part, after Dr. Crandall first applied the paste. The patient, aged sixty-two years, was first seen in the spring of 1872. Four years before he had a small epithelioma of the neck removed by nitric acid. Nine months after a tumor on the vertex, supposed to be a wen, commenced ulcerating in consequence of a slight blow, and assumed the character of medullary carcinoma. When I first saw him, the broad overhanging portion was two inches in diameter, and rested upon a firm base half that size. The fetor was almost intolerable. The site of the old epithelioma had also ulcerated anew. There was no glandular affection. The paste was first applied to one-third of the tumor, left on two days, and another part attacked, and after the same length of time the remaining portion; poultices were then applied. The line of demarkation was perfect, but it was nearly six weeks before the diseased mass was completely removed. The bone was found to be denuded of periosteum for a space more than an inch in diameter. The healing process was very tedious. Three bony exfoliations were at different times removed, and over a year elapsed before cicatrization was complete.

Six months after the tumor of the scalp was cauterized I removed by the same treatment the recurrent epithelioma of the neck, which meanwhile had become one inch in diameter. The slough speedily separated, and in six weeks the sore was healed. There has been no return of the disease up to this date. I have treated the following cases in the same way, and with uniformly satisfactory results:

CASE I.—Mr. L., aged fifty-five years, had a small warty growth on the side of the nose, which two years before began to show signs of malignancy. At that time a physician advised him to let it alone, which he did until the cervical and axillary

glands became successively infected. Removal was effected by the paste in ten days, and healing complete in six weeks, without leaving any visible cicatrix. He died two years after of what was supposed to be cancer of the lung.

CASE II.—Mrs. ——, aged sixty years, had an epithelioma on the forehead just above the left eye, which had annoyed her for nearly three years, and had finally attained a diameter of three-quarters of an inch. The paste was applied to the entire surface. The slough came away in ten days, and in four weeks cicatrization was complete. The patient has continued well now for two years.

CASE III. was an epithelioma of the face in a man aged fifty-eight years. It was ten lines in diameter, was removed in eight days, and the sore healed by granulation in six weeks. Nine months after there has been no recurrence. In this case the power of election already mentioned was well shown. The lint was accidentally moved from the point of application before it hardened, so that when he came back in two days it covered nearly as much healthy skin as cancerous tissue, but the diseased portion only had been destroyed.

CASE IV.—Miss ——, aged fifty years, whose father died of cancer, had an epithelial ulcer of two years' standing near the inner canthus of the left eye. In February, 1874, the mucilage was applied and allowed to remain on for thirty-six hours. The swelling of the eyelids and face was considerable but soon subsided under poultices, and the cure was complete in five weeks. The patient remains well, November, 1874.

CASE V.—Mr. ——, aged sixty-four, had a flat epithelioma, situated over the superior angle of the left scapula, an inch and a half in diameter and nearly circular, which had existed for two years, and was the seat of severe stinging and darting pains. The skin was first cauterized with potassa fusa to

produce a good absorbing surface, and then the mucilage applied in March, 1874. After the slough came away, some hardness remaining in a portion of the sore, this was treated in the same way. The cure was complete in two months, and continues so November, 1874.

CASE VI.—Mrs. R., aged forty-nine years, had a medullary cancer of the arm seated over the middle of the triceps muscle. It first appeared as a wart, six years before, and had gradually increased in size until it measured three inches in diameter and rested upon a base about half that size. Increasing pain compelled her to seek relief. The fetor was excessive and hemorrhages frequent. There was a hard tumor in the axilla, which was very painful. The case was similar to one of Marsden's, in which he removed the tumor with a loop of wire, and then applied the mucilage to the base; but in order to test the power of the arsenic I applied it to one-fourth of the surface, repeating the operation every other day, until the whole was cauterized. The mass was then cut away to the base without pain, and the paste once more applied, which brought away the remaining portion six days after. The cure was completed in twenty-six days. In the meantime the tumor in the axilla proved to be an abscess, was opened, and soon healed. The patient remains well at present—November, 1874—while her general health has greatly improved.

CASE VII.—Miss—, aged forty-five years, applied for treatment at Demilt Dispensary, March 6, 1874, with a malignant tumor on the forehead just above the outer angle of the left eye. It was oblong, nearly two inches in length and one in width, with considerable elevation. It was soft, very vascular, and often bled freely. Four years before the growth was treated for a time with terchloride of antimony, but the

severity of the pain attending the application caused her to abandon it. The tumor was rapidly reproduced. In October, 1872, it was almost entirely removed with nitric acid. When first seen by myself the tumor was larger than ever before. The mucilage was applied and allowed to remain thirty-six hours, when, the line of demarkation having nearly encircled the growth, poultices were applied. Two days after the paste was re-applied to the deepest portion. In two weeks the slough separated, and granulation proceeded rapidly until the wound was almost healed, when diseased tissue again showed itself. It was necessary to make another application of the paste, with the result of securing perfect cicatrization in sixty days. Six months after the patient continues well.

To summarize my experience in the use of the arsenical mucilage in cancer, I believe—

1. That it is to be preferred to any other caustic, as giving less pain during its application.
2. In cases to which it is adapted it is superior to excision, (*a*) because of the greater readiness of patients to submit to it, (*b*) the less amount of shock, and (*c*) the avoidance of anæsthetics.
3. It acts in a remarkable degree on the cancer, while the surrounding healthy tissues are comparatively unaffected by it.
4. When properly used it is free from danger, and the fear therefore of poisoning is groundless.
5. It is most efficient in the earlier stages of cancer, the same being true of all other modes of treating this affection.
6. It being of such easy application, cancer patients may be treated promptly at home and by their usual medical attendant.

7. Finally, a general acceptance of this plan of treatment would so far promote the early removal of cancer that many lives, which would otherwise be lost in consequence of the dread of a surgical operation, would thereby be saved.

NEW YORK.





